

23-1648

UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

SHAMROCK BUILDING MATERIALS, INC.,

Plaintiff-Appellant

v.

UNITED STATES,

Defendant-Appellee

**Appeal from the United States Court of International Trade in Case No.
1:20-cv-00074-TCS, Judge Timothy C. Stanceu.**

**REPLY BRIEF OF PLAINTIFF-APPELLANT SHAMROCK BUILDING
MATERIALS, INC.**

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FORM 9. Certificate of Interest

Form 9 (p. 1)
March 2023

UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT

CERTIFICATE OF INTEREST

Case Number 23-1648

Short Case Caption Shamrock Building Materials, Inc. v. US

Filing Party/Entity Shamrock Building Materials, Inc.

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TABLE OF CONTENTS

INTRODUCTION	5
SUMMARY OF ARGUMENT	5
ARGUMENT	8
I. The Conduit Is Not Classifiable Under Heading 7306 Because It Is <i>Prima Facie</i> Classifiable in Heading 8547.	8
II. The CIT Incorrectly Held that the Subject Conduit Is Not Classifiable in Heading 8547	8
A. The CIT Erroneously Interpreted the Term “Lined with Insulating Material” in Heading 8547.....	8
B. Shamrock’s Electrical Conduit Is <i>Prima Facie</i> “Lined with Insulating Material.”.....	12
C. The CIT Erroneously Rejected Shamrock’s Arguments Regarding the Term “Lined with Insulating Material.”.....	20
III. The CIT Erroneously Interpreted Explanatory Note 85.47.....	26
A. The CIT Used the Explanatory Notes to Incorrectly Interpret Heading 8547.....	26
B. The CIT Incorrectly Disregarded the Exemplars of Insulating Material in Explanatory Note 85.47.	29
IV. Customs Ruling N306508 Is Entitled to <i>Skidmore</i> Deference.	33
CONCLUSION AND RELIEF SOUGHT	35

TABLE OF AUTHORITIES

	Page(s)
Cases	
<i>Apple Inc. v. United States</i> , 964 F.3d 1087 (Fed. Cir. 2020)	26
<i>Drygel, Inc. v. United States</i> , 541 F.3d 1129 (Fed. Cir. 2008)	31
<i>Inter-Maritime Forwarding Co. v. United States</i> , 70 Cust. Ct. 133 (1973).....	25
<i>JVC Co. of Am. v. United States</i> , 234 F.3d 1348 (Fed. Cir. 2000)	25
<i>King v. Burwell</i> , 576 U.S. 473 (2015).....	24
<i>Langdon v. McDonough</i> , 1 F.4th 1008 (Fed. Cir. 2021)	27
<i>Monsanto Co. v. David</i> , 516 F.3d 1009 (Fed. Cir. 2008)	9, 17
<i>Naftone, Inc. v. United States</i> , 67 Cust. Ct. 341 (1971).....	25
<i>Pillsbury Co. v. United States</i> , 431 F.3d 1377 (Fed. Cir. 2005)	31
<i>Sigma-Tau HealthScience, Inc. v. United States</i> , 838 F.3d 1272 (Fed. Cir. 2016)	24
<i>Skidmore v. Swift & Co.</i> , 323 U.S. 134 (1944).....	33-35
<i>Travelers Ins. Co. v. United States</i> , 303 F.3d 1373 (Fed. Cir. 2002)	27
<i>United States v. Mead Corp.</i> , 533 U.S. 218 (2001).....	34

Warner-Lambert Co. v. United States,
407 F.3d 1207 (Fed. Cir. 2005) 31, 33

Well Luck Co. v. United States,
887 F.3d 1106 (Fed. Cir. 2018) 31

Wilton Indus. v. United States,
741 F.3d 1263 (Fed. Cir. 2013) 11, 15

Statutes

HTSUS Heading 7306 *passim*

HTSUS Heading 8547 *passim*

Other Authorities

Fed. R. Evid. 701 19, 20

Fed. R. Evid. 702 19, 20

FED. R. EVID. 703 9, 17

FED. R. EVID. 803 9

INTRODUCTION

Plaintiff-Appellant Shamrock Building Materials, Inc. (“Shamrock”) hereby submits its reply to the brief filed by Defendant-Appellee, the United States (“Government Br.”).

SUMMARY OF ARGUMENT

The undisputed facts demonstrate that the electrical metallic tubing (“EMT”) finished conduit and intermediate metal conduit (“IMC”) produced by Conduit S.A. de C.V. d/b/a RYMCO (“RYMCO”) that Shamrock imported from Mexico (collectively, “subject conduit”) are lined with insulating material that serves an insulating purpose, and therefore it is *prima facie* classifiable pursuant to Heading 8547 of the Harmonized Tariff Schedule of the United States (“HTSUS”). It is not disputed that the coating on the interior of the subject conduit is primarily epoxy, melamine, and silicone, and includes amounts of other materials described by the manufacturer as “insulating.” Appx1804; Appx1591-92; Appx0304-0311; Appx0392-94. The Government admits that the materials epoxy, melamine, and silicone line the conduit, Appx0146; Appx0151; Appx1429; Appx1414, and admits that they are electrically insulating materials, Appx0153; Appx1430; Appx0161; Appx1437; Appx0192. The electrical tests performed on the subject conduit demonstrate that the epoxy coating functions, as intended, with an electrically insulating property. Appx0022; Appx0832-35; Appx0858-59; Appx1223;

Appx2358-59; Appx2369-70. None of the arguments raised by the Government refute these undisputed facts.

Therefore, the undisputed facts show that the subject conduit is *prima facie* classifiable pursuant to Heading 8547 as “electrical conduit tubing of base metal... lined with insulating material.” HTSUS, Heading 8547. Nothing more is required for the subject conduit to be so classified, and the U.S. Court of International Trade (“CIT”) erred when it interpreted Heading 8547 otherwise.

Despite admitting that the subject conduit is lined with materials that are insulating and that the epoxy coating functions with an electrically insulating property, the Government argues (1) that it does not perform the specific function that the Government assumes it should, without evidence, and (2) cites that Heading 8547 covers electrical equipment and the statutory term “electrical conduit” to support its claims. But the Government misconstrues the electrically insulating purpose that the epoxy coating serves on the subject conduit and in the electrical industry.

Both issues that the Government raise actually support Shamrock’s classification. First, the epoxy coating provides the layer of electrical resistance and electrical protection intended of insulating varnishes on electrical equipment such as the electrical conduit here. Second, the epoxy coating commercially distinguishes the subject conduit from generic steel pipes on the market in the

electrical conduit industry that may be suitable for use as electrical conduit but are lined with materials that are merely corrosion resistant such as zinc. The commercial dichotomy between electrical conduit lined with epoxy or other insulating materials and generic steel pipe that may be suitable for use as electrical conduit is reflected in HTSUS Headings 8547 and 7306. The Government's arguments, and the CIT's holding, thus fail to interpret the HTSUS in context, with its common and commercial meaning, and in relation to the electrical industry and statutory term "electrical conduit."

Customs has classified merchandise identical to the subject conduit under Heading 8547 in Customs Ruling No. N306508. The Government argues that the Court should disregard the pertinent Customs ruling because the Court is not bound by administrative determinations. However, Customs rulings are entitled to deference relative to their power to persuade, and the Government declined to argue that N306508 is either not pertinent to, or persuasive regarding, the classification of the subject conduit.

Therefore, the Government fails to prove that the subject conduit is *not* *prima facie* classifiable pursuant to Heading 8547, and the Court should reject its arguments as set forth below.

ARGUMENT

I. The Conduit Is Not Classifiable Under Heading 7306 Because It Is *Prima Facie* Classifiable in Heading 8547.

The Government argues that the CIT correctly held that Heading 7306 is the correct classification for the subject conduit, Government Br. at 15-17, but the undisputed facts demonstrate that the subject conduit meets the plain language of Heading 8547 and is explicitly excluded from Heading 7306. Section XV, within which Heading 7306 is found, “does not cover:...Articles of section XVI (machinery, mechanical appliances and *electrical goods*).” Section XV Note 1(f). Section XVI includes Heading 8547. Accordingly, if the Court finds that the subject conduit is *prima facie* classifiable under Heading 8547, then it is not classifiable pursuant to Heading 7306. Appx0013. For the following reasons, the subject conduit is *prima facie* classifiable pursuant to Heading 8547, and therefore is not classifiable in Heading 7306.

II. The CIT Incorrectly Held that the Subject Conduit Is Not Classifiable in Heading 8547.

A. The CIT Erroneously Interpreted the Term “Lined with Insulating Material” in Heading 8547.

The Government argues that “Shamrock’s electrical conduit does not fall within the purview of {H}eadings 8547” because Chapter 85 of the HTSUS covers electrical equipment, because dictionaries define “insulating” to mean “preventing or stopping the flow of electricity,” and because the Explanatory Notes

differentiate between insulated and uninsulated electrical conduit. Government Br. at 17-21. But, none of these arguments demonstrate that the plain language of Heading 8547 would not cover the subject conduit.

The Government argues that the term “‘insulating material’ must be interpreted as it relates to electrical conduit tubing and electrical equipment” because Heading 8547 is included in Chapter 85, which covers electrical equipment. Government Br. at 18-19. Yet, the Government ignores the fact that both Appellant’s expert and the Government’s expert agreed that electrically insulating materials, and insulating varnishes in particular, are applied to electrical equipment like the subject conduit “to contribute to the total mechanical strength, and the electrical, thermal, and chemical resistance” of the equipment. Appx1707; Appx0148; Appx0533; Appx0162; Appx1419; Appx1438.¹ The Government also admits that expert testimony explained that insulating varnishes “are applied over electrical conductors to provide a layer of electrical isolation and prevent

¹ Below, the Government argued that certain testimony from Dr. Jeffrey Gotro was hearsay. But the statements to which the Government objected are excepted from the rule against hearsay because they are statements in learned treatises relied upon by Dr. Gotro from authorities he established as reliable and ancient documents like the IEEE Electrical Insulation Magazine. FED. R. EVID. 803(16), (18); FED. R. EVID. 703 (“If experts in the particular field would reasonably rely on those kinds of facts or data in forming an opinion on the subject, they need not be admissible for the opinion to be admitted.”); *Monsanto Co. v. David*, 516 F.3d. 1009, 1016 (Fed. Cir. 2008) (“Rule 703 expressly authorizes the admission of expert opinion that is based on ‘facts or data’ that themselves are inadmissible”); Appx2300-01.

shorting.” Appx0149; Appx1421; Appx1715. The term “insulating material” as it relates to electrical equipment and electrical conduit thus includes materials that serve the electrically insulating function that the epoxy coating performs here.

The Government also cites the same dictionary definitions that Shamrock cited in its opening brief to support that “insulating” is defined as “preventing or stopping the flow of electricity.” Government Br. at 19. The Government admits that the coating materials are insulating. Appx1430; Appx1437. The electrical testing in this case indisputably shows that the epoxy coating provides the electrically insulating function that is intended of insulating varnishes on electrical equipment. Appx0828-39; Appx0858-59; Appx0644-48; Appx1223; Appx2358-59; Appx2369-70. As the CIT held, “the uncontested fact is that the coating material, in the form in which it exists on the inside of the subject conduit, has a measurable electrically-*insulating* property.” Appx0022 (emphasis added). The cited definitions do not support the Government’s, or the CIT’s, assumption that the “insulating material” must perform the specific function that each assumes without evidentiary support.²

² As Shamrock discusses later in this brief, the Government and the CIT claim that subject conduit is not classifiable pursuant to Heading 8547 because, allegedly, it “does not significantly impede the flow of electrical current in the type of wiring circuits that would be found in or around residential commercial buildings.” Government Br. at 21-22 (citing Appx0017).

The Government ignores the fact that the common meaning of the term “insulating” includes the non-electrical functions that the epoxy coating performs. *See* Shamrock Br at 62-63. The Government does not dispute the fact that the “smooth interior coating insulates the wall to provide easy installation of wire.” Government Br. at 23; Appx1588-1589. The Government argues that the term “insulating material” must be interpreted as it relates to electrical conduit and electrical equipment, Government Br. at 18-19, but disregards that insulating materials in the electrical industry perform non-electrical functions—other than corrosion prevention—on electrical equipment and for electrical conduit in particular.³ *Wilton Indus. v. United States*, 741 F.3d 1263, 1266 (Fed. Cir. 2013) (“HTSUS terms are construed in accordance with their common and commercial meaning.”).

The Government quotes Explanatory Note 85.47 to argue that “the HTSUS contemplates two categories of electrical conduit, namely insulated electrical conduit (Heading 8547) and uninsulated electrical conduit (Heading 7306).” Government Br. at 19-20. But the cited quote from the Explanatory Note expressly states that “this group covers the metal tubing used in permanent electrical installations (e.g., house wiring) as insulation and protection for the wires,

³ Explanatory Note 85.47 excludes from Heading 8547 metal tubing coated simply to prevent corrosion. Appx1312. Other insulating functions are not excluded by the Explanatory Note.

provided it has *an interior lining of insulating material*,” and does not mention the term “insulated electrical conduit.” Appx1312. The plain language of Heading 8547, and the express text of Explanatory Note 85.47, cover electrical conduit “lined with insulating material.” Heading 8547, HTSUS; Appx1312. Contrary to the Government’s argument, neither Heading 8547 nor Explanatory Note 85.47 use the term “insulated electrical conduit.” *See* Shamrock Br. at 38-41.

The Government also quotes Explanatory Note 85.47 to describe the “substances that may be ‘insulating material’ for purposes of the {H}eadings,” Government Br. at 20-21, but fails to acknowledge the epoxy coating is “plastic” and “insulating varnish,” and thus within the scope of Heading 8547 pursuant to Explanatory Note 85.47. Appx0145; Appx0178-79; Appx1591-92; Shamrock Br. at 50-55.

B. Shamrock’s Electrical Conduit Is *Prima Facie* “Lined with Insulating Material.”

1. Electrical Testing Demonstrates that The Epoxy Coating Is Insulating Material and Serves an Electrically Insulating Purpose.

The Government argues that the CIT correctly held that the subject conduit is not “lined with insulating material” because electrical testing allegedly shows that the epoxy coating does not “significantly impede the flow of electrical current in the type of wiring circuits that would be found in or around residential or commercial buildings.” Government Br. 21-22. But, that requirement is found

nowhere in Heading 8547 or in Explanatory Note 85.47. The CIT cited nothing for its assertion or to support that this must be the purpose of the insulating material. Appx0017. Additionally, the statement results in an unintelligible and unenforceable standard for importers to follow. It is an extra-statutory test invented by the CIT that directly conflicts with the recognized commercial meaning of the term “insulating material.”

According to the Institute of Electrical and Electronics Engineers (“IEEE”), the purpose of insulating material on electrical equipment includes:

...to form a protective resinous film over and throughout the main electrical structural components and insulations of an electrical apparatus in order to contribute to the total mechanical strength, and the electrical, thermal, and chemical resistance.

Appx1707. Both experts agreed that this was the purpose of electrically insulating varnishes, which are within the scope of Heading 8547 pursuant to Explanatory Note 85.47. Appx0148-49; Appx0162; Appx1419; Appx1438; Appx1312. Expert testimony also explains that insulating varnishes “are applied over electrical conductors to provide a layer of electrical isolation and prevent shorting.” Appx0149; Appx1421; Appx1715. The definition of electrically insulating varnishes notes that they are “applied to and cured on electrical components” to provide “electrical, mechanical and environmental protection.” Appx1706.

The purpose of electrically insulating varnishes in the electrical industry is consistent with the purpose of the epoxy coating as described by the coating

manufacturer, Pinturas Diamex. Pinturas Diamex informed Shamrock, through RYMCO (“Conduit S.A. de C.V.”), that the component materials of the coating are used in electrically insulating varnishes and resins, and that the coating “will provide a certain barrier against the transfer of electrons applied to the surface.” Appx 1592; *see also* Appx1454-55. The Government’s argument and the CIT’s holding disregard the purpose of insulating material and seek to impose a standard that has no basis in Heading 8547 or the relevant Explanatory Note.

The electrical testing on the subject conduit demonstrates that the epoxy coating serves the purpose of electrically insulating varnish. One electrical test showed that *no* voltage flows through the epoxy coating. Appx0826-39. Other electrical testing shows the epoxy coating resists electrical current, including testing conducted by the Government’s own expert, Dr. Meliopoulos, and G2MT Laboratories.⁴ Appx0857-59; Appx1223; Appx2358-59; 2369-70. The CIT held that “the uncontested fact is that the coating material, in the form in which it exists on the inside of the subject conduit, has a measurable electrically insulating

⁴ Both experts and the IEEE warn that electrical testing should not be performed on thin films of varnish as they were in the test conducted by Dr. Meliopoulos. Appx1713 (“Many of these test methods can only be performed on thick sections of resin composition rather than on thin films, the state in which varnishes are actually used.”); Appx0444-46 (“Volume resistivity is... It’s not typically measured on some thin coating.”). Dr. Meliopoulos testified that he did not have sufficient coating material to determine the coating’s resistivity using a repeatable, acceptable measurement method. Appx0542-44; Appx1223 (“A suitable sample for this measurement has not been provided.”).

property.” Appx0022; Appx0016. The electrical testing shows that the epoxy coating serves the electrically insulating purpose intended of insulating varnishes in the electrical industry, consistent with the purpose described by Pinturas Diamex.

The epoxy coating is made of insulating material. Defendant admits that epoxy, melamine and silicone have electrical resistivity of at least 10^{12} ohm-meters, which is sufficient to qualify each as an electrical insulator according to both expert reports. Appx0148; Appx0152-53; Appx1418; Appx1429-30; Appx1220; Appx0192. The Government admits that both experts agreed that epoxy and silicone—materials that line the subject conduit—are insulating. Appx0161; Appx0179; Appx1437; Appx0147; Appx1414-15.

The subject conduit is *prima facie* classifiable as “lined with insulating material” because the epoxy coating is composed of materials that are admittedly insulating and serves an electrically insulating purpose in the electrical industry.

Wilton Indus., 741 F.3d at 1267 (“That is enough for the language of the heading to apply.”); BLACK’S LAW DICTIONARY (11th ed. 2019) (defining “*prima facie*” to mean “at first sight; on first appearance but subject to further evidence or information”).

2. *The Government’s Criticism of Witness Testimony Is Unfounded and Immaterial.*

The Government argues that the CIT decision should be affirmed because Dr. Gotro allegedly did not opine on the coating at issue, and that Dr. Jackson allegedly did not consider the epoxy coating to be an insulator. Government Br. at 23-25. The Government’s criticisms of Dr. Gotro and Dr. Jackson do not remove the subject conduit from the scope of Heading 8547.

The Government contends Dr. Gotro, Shamrock’s expert, “did not inspect samples of the electric conduit, was not provided with the chemical composition of the epoxy coating, was not provided with the methodology for development of the coating and did not receive information on the application of the coating.” Government’s Br. at 23-25. However, Dr. Gotro did opine on the composition and electrically insulating quality of the epoxy coating.

The issue in this case is whether the micron-thin epoxy coating has the material property of being insulating. Dr. Gotro is qualified to opine on this issue based on his experience developing similar products and the tests conducted on the subject conduit. Dr. Gotro is a member of the IEEE and has experience developing micron-thin organic polymers, including epoxies, for electrically insulating applications. Appx0175-77; Appx0208-16; Appx0236-49; Appx0260-61; Appx0145; Appx1413. Contrary to the Government’s claims, Dr. Gotro’s opinion was based on tests conducted on samples of the subject conduit, and included

review of the electrical tests conducted in this case. Appx0144-46; Appx1413-14; Appx0177; Appx0337-0342; Appx0445-46. Based on his experience formulating materials like the epoxy coating for insulating applications, Dr. Gotro opined that the epoxy coating “provides electrical insulation.” Appx0179; Appx0304-07; Appx0334-36.

To the extent the Government claims Dr. Gotro should have conducted tests himself, whether Dr. Gotro reviewed the tests conducted by others does not diminish the relevance of his expert testimony. FED. R. EVID. 703 (“An expert may base an opinion on facts or data in the case that the expert has been made aware of or personally observed.”); *Monsanto Co. v. David*, 516 F.3d 1009, 1015 (Fed. Cir. 2008) (“{R}eliance on scientific test results prepared by others may constitute the type of evidence that is reasonably relied upon by experts for purposes of Rule of Evidence 703.”). Indeed, Dr. Gotro testified that it is “common to have others do testing” in practice. Appx0238-40.

The Government also faults Dr. Gotro’s opinion because the chemical testing he used identified epoxy, melamine, and silicone in the coating, but did not identify the other materials that were not disclosed to Shamrock by Pinturas Diamex. Government Br. at 23-25. In its letter, Pinturas Diamex explained that the epoxy coating “has the following insulating materials, among others: epoxy resin, melamine resin, silicone additives,” but “because of trade secrets and

patents, it is impossible for us to give you the formulation.” Appx1591. The text from the Pinturas Diamex letter states that the epoxy coating consists of “insulating materials,” including epoxy, melamine and silicone “among other” *insulating materials*, but it does not evidence that non-insulating materials are present in the coating’s formulation. Appx1591.

Additionally, Dr. Gotro has experience formulating insulating materials such as the epoxy coating for insulating applications and opined on the “other” materials referenced in the letter. Dr. Gotro testified that based on his experience the “other” materials referenced in Pinturas Diamex’s letter would not affect the electrically insulating property of the epoxy coating, and that the resistivity of epoxies remains high regardless of the curing agent that may have been used as the “other” material. Appx0304-07; Appx0392-94 (discussing Appx0852). Dr. Gotro did not need the full composition of the epoxy coating to opine on its material properties as he is a materials scientist with experience formulating similar products for insulating purposes.

Regarding the application of the epoxy coating, the electrical resistivity of the epoxy coating is a material property that does not change with application. It stays the same regardless of whether the material is a block or a coating, or whether it is used in a circuit board or as lining on a pipe. Appx0152-53; Appx1429-30. Dr. Gotro testified that variations in

application would “not usually” nullify the insulating property of an insulating material. Appx0311-12. The Government’s criticism of Dr. Gotro’s opinion fails to demonstrate that the application of the epoxy coating to the subject conduit precludes it from being *prima facie* classifiable as “lined with insulating material.”

The Government also claims that Dr. Jackson allegedly “did not consider the degree of resistivity or resistance of the coating... sufficient to qualify it as an insulator.” Government Br. at 23. But the cited testimony from Dr. Jackson takes language from a draft of one of his lab reports out of context. Dr. Jackson clarified in his testimony that “since it has a higher electrical resistance than the uncoated material, it’s providing electrical insulation in that sense compared to uncoated material. So, it has some electrical insulating properties.” Appx0767-68. Indeed, the results of Dr. Jackson’s tests demonstrate that the subject conduit provides higher electrical resistance than uncoated rigid conduit. Appx0859; Appx0158-59; Appx1434-35. Dr. Jackson also testified that he is not “aware of the amount of electrical resistance required for a material to be considered an electrical insulator,” and his opinion is thus speculative.⁵ Appx0664-66; Appx1816. The data from the

⁵ Dr. Jackson is a fact witness whose testimony was limited to describing the tests he conducted measuring the electrical resistance of the coating and the results of that testing. He was not an expert witness asked to opine on whether the electrical coating qualified as insulating material. The Government has not

G2MT test demonstrates that the subject conduit has electrically insulating properties, and the statement from Dr. Jackson that the Government cites fails to prove that the subject conduit is not *prima facie* classifiable pursuant to Heading 8547.

C. The CIT Erroneously Rejected Shamrock's Arguments Regarding the Term "Lined with Insulating Material."

The Government argues that the CIT correctly interpreted the term "lined with insulating material" because it applied General Rule of Interpretation ("GRI") 1 to read Heading 8547 in the context of electricity and consistently with Heading 7306. Government Br. at 26-33. However, the Government misunderstands Shamrock's argument and disregards the mutually exclusive categories of electrical conduit covered by Headings 8547 and 7306.

The Government mischaracterizes Shamrock's argument as taking issue with the construction of Heading 8547 to require "the insulating material to actually perform an insulating function with respect to the purpose of the conduit." Government Br. at 26. To the contrary, Shamrock argues only that the insulating function must be understood in the context of the function of the subject conduit as explained in Explanatory Note 85.47. Appx1312 (noting electrical conduit is used to house wires "as insulation and protection for the wires"); Appx1454-55

established Dr. Jackson as an expert for purposes of admitting Dr. Jackson's opinion about the epoxy coating. Fed. R. Evid. 701-02.

(describing intended use of the subject conduit and the function of the epoxy coating). Electrical conduit is electrical equipment, and as such the epoxy coating must—and does—perform the insulating function intended of it in the electrical industry. Appx1804; Appx0976-77; Appx0022. The Government’s interpretation fails to read Heading 8547 in the context of electricity, electrical conduit, and the HTSUS.

The Government suggests that Shamrock’s argument would render Heading 7306 a surplusage and “improperly encroach on the scope” of Heading 7306. Government Br. at 26-28. However, Shamrock’s argument does not nullify Heading 7306, and reads both provisions consistently with each other to cover mutually exclusive categories of conduit pipe. Unlike the Government or the CIT, Shamrock presented testimony and argument regarding the types of electrical conduit sold in commerce and the different linings on the interior of each type. Specifically, Shamrock contrasted the qualities of the subject conduit from “rigid” conduit, which is coated on the interior merely to prevent corrosion, and which Shamrock has imported pursuant to Heading 7306 consistent with its interpretation of Heading 8547. Appx0903; Appx1375-77. The CIT never addressed this evidence. Additionally, industry standards such as UL 797 distinguish conduit lined with “organic coatings” from conduit lined with “alternative corrosion resistant coatings” or zinc. Appx1601.

The distinction in the types of electrical conduit sold on the market—(a) those that have an interior lining of insulating material such as epoxy and that are so lined to insulate and protect the wires housed inside the subject conduit versus (b) generic steel pipe that is lined with zinc or other alternative corrosion-resistant coatings and that may be suitable for use as electrical conduit—is precisely the dichotomy of conduit pipe established by Headings 8547 and 7306. Shamrock Br. at 45-56. Far from nullifying Heading 7306, this construction appropriately recognizes that “other” steel pipe that may be suitable for use as electrical conduit is classified in Heading 7306, HTSUS. Generic steel pipe classifiable under Heading 7306 is not coated on the interior with insulating material and thus would not provide the electrical insulation and protection that the subject conduit provides. Shamrock accordingly reads the term “insulating material” in relation to the term “electrical conduit tubing” in Heading 8547, contrary to the Government’s argument. Government Br. at 28.

The Government erroneously claims that Shamrock’s argument is “as long as the interior coating of the electrical conduit contains a substance that is generally known to have insulating properties,” then “the conduit would be classifiable pursuant to Heading 8547.” Government Br. at 28. This assertion is a red herring that fundamentally distorts Shamrock’s argument. Shamrock argues that the subject conduit is classifiable pursuant to Heading 8547 because the epoxy

coating is an insulating material *which* the record establishes serves its intended insulating purpose as recognized in the electrical industry. That is, the coating “form[s] a protective resinous film... in order to contribute to the total mechanical strength, and the electrical, thermal, and chemical resistance” of the subject conduit. Appx 1707. Shamrock’s argument thus accounts for (a) the mutually exclusive types of conduit pipe sold in commerce and found in the context of the HTSUS, (b) industry standards outlining the types of coatings on the interior of conduit pipe, (c) the insulating purposes of insulating materials on electrical equipment, and (d) the insulating and protecting functions that electrical conduit must provide to the wires run through it.

It is the Government, not Shamrock, that fails to read Headings 8547 and 7306 consistently. The Government has provided no evidence that there exists any insulated conduit on the market that performs the specific function that it alleges Shamrock’s conduit should perform. Nor has the Government rebutted the detailed explanation and argument provided by Shamrock regarding the different types of electrical conduit, the functions that each performs, and how these mutually exclusive categories are reflected in the HTSUS. Nor did the CIT. *See* Shamrock Br. at 46.

The Government claims that Shamrock’s argument contradicts the principles of GRI 1 because Shamrock noted that plastics, such as epoxy, are listed as

insulating materials in a Subheading 8547.20, HTSUS. Government Br. at 30; Appx0145; Appx1413. Shamrock argues that plastic is an insulating material pursuant to the plain language of Heading 8547 viewed in statutory context, and that reading Heading 8547 to include electrical conduit lined with a coating of plastic is consistent with the statutory scheme, where the coating performs the electrically insulating function intended on electrical equipment like the subject conduit here. The Government presented no evidence to dispute the expert testimony that plastics are “poor conductors of heat and electricity. Most are insulators with high dielectric strength,” and thus would be “insulating materials” pursuant to the Heading’s plain language. Appx0150-51; Appx1425-26.

Additionally, Explanatory Note 85.47 expressly lists “plastics” as an insulating material for purposes of Heading 8547. Appx1312. The fact that Subheading 8547.20 lists plastics as insulating material for fittings merely demonstrates that Shamrock’s proposed interpretation of Heading 8547 is consistent with the overall statutory scheme. *See Sigma-Tau HealthScience, Inc. v. United States*, 838 F.3d 1272, 1281 (Fed. Cir. 2016) (noting that vitamin D was unambiguously included under the relevant heading because it was expressly listed in a subheading). As the Government itself noted, courts “construe statutes, not isolated provisions.” Government Br. at 29 (citing *King v. Burwell*, 576 U.S. 473, 135 (2015)).

Shamrock's reference to Subheading 8547.20 does not expand the scope of Heading 8547 or conflict with GRI 1.

The Government also argues that the *Naftone* and *Inter-Maritime* holdings have “no bearing” on the interpretation of Heading 8547 because the cases relate to TSUS provisions that differ from the HTSUS language at issue. Government Br. at 31-32 (citing *Inter-Maritime Forwarding Co. v. United States*, 70 Cust. Ct. 133, 140 (1973); *Naftone, Inc. v. United States*, 67 Cust. Ct. 341 (1971)). But Shamrock did not cite *Naftone* and *Inter-Maritime* because the TSUS provisions in those cases were directly applicable to this case. Rather, *Naftone* and *Inter-Maritime* are relevant because they corroborate and contextualize lexicographic sources and the insulating applications of materials the court has found to be “insulating materials.” Shamrock Br. at 29-31. For example, testimony in *Naftone* corroborates that the term “insulator” means that it “does not conduct electricity.” *Naftone*, 67 Cust. Ct. at 343. Additionally, one witness in *Inter-Maritime* testified that epoxy and resins are electrical insulators. *Inter-Maritime*, 70 Cust. Ct. at 135. Although not dispositive, these cases are instructive regarding the common and commercial meanings of the term “insulating material” as that term is used in the electrical field. *JVC Co. of Am. v. United States*, 234 F.3d 1348, 1355 (Fed. Cir. 2000) (quoting H.R. Conf. Rep. No. 110-576, at 549-50 (1988), reprinted in 1988 U.S.C.C.A.N. 1547, 1582-83) (“{O}n a case-by-case basis prior decisions

{regarding the TSUS} should be considered instructive in interpreting the HTS{.}”).

III. The CIT Erroneously Interpreted Explanatory Note 85.47.

A. The CIT Used the Explanatory Notes to Incorrectly Interpret Heading 8547.

The Government argues that the CIT did not use the Explanatory Notes to improperly interpret Heading 8547 because it contends the CIT did not read Explanatory Note 73.06 to create a separate category of conduit tubing. According to the Government, the CIT “simply used the term ‘insulated metal tubing’ as a short-hand reference for the term ‘electrical conduit tubing lined with insulating material{.}’” Government Br. at 34. But, the CIT did much more than that. A careful reading of the opinion leaves no doubt that the CIT impermissibly used Explanatory Note 73.06 to narrow the meaning of Heading 8547. *See Apple Inc. v. United States*, 964 F.3d 1087, 1095-96 (Fed. Cir. 2020) (“Explanatory Notes... cannot be used to ‘narrow’ or amend or create ambiguity in the language of a HTSUS heading.”) (internal citation omitted).

The CIT opinion states that Explanatory Notes 73.06 and 85.47 “draw a distinction between two classes of goods, i.e., insulated and uninsulated electrical conduit tubing,” and then claims that “the materials the parties have provided in support of their respective summary judgment motions do not describe the subject conduit, when offered for sale in commerce, as ‘insulated electrical conduit’ or

‘insulated electrical conduit tubing.’” Appx0015-16. As discussed in Shamrock’s principal brief, the term “insulated electrical conduit” is not found in Heading 8547. *See* Shamrock Br. at 38-41. Moreover, the opinion makes clear that the CIT reads that term, not merely as a short hand for “electrical conduit tubing lined with insulating material,” but rather as an industry term of art with a particular commercial meaning. In that same paragraph, the CIT then finds that the electrically resistive function that the epoxy coating serves “does not do so in a way that would qualify the conduit as an insulator.” Appx0017. The CIT therefore incorrectly used the term “insulated electrical conduit” from Explanatory Note 73.06 to substantively define the standard to which it believed the subject conduit had to comply to be *prima facie* classifiable under Heading 8547, and read the term “insulating material” out of Heading 8547 altogether.

Heading 8547 covers “electrical conduit tubing” that is “lined with insulating material,” and it is this statutory text which controls. *See, e.g., Langdon v. McDonough*, 1 F.4th 1008, 1011 (Fed. Cir. 2021) (“We cannot rewrite {the} text to include criteria absent from its face.”); *Travelers Ins. Co. v. United States*, 303 F.3d 1373, 1381 (Fed. Cir. 2002) (“As the Supreme Court has repeatedly recognized, ‘{c}ourts are not authorized to rewrite a statute{.}’”). The Government concedes that the terms “insulated electrical conduit” or “insulated electrical conduit tubing” from Explanatory Note 73.06 do not appear in Heading

8547 or Explanatory Note 85.47, and “the only category of goods that are classifiable in Heading 8547 is electrical conduit tubing lined with insulating material.” Government Br. at 33-34.

The Government claims that the CIT read Explanatory Notes 73.06 and 85.47 together and that the reference to “insulated metal tubing” in Explanatory Note 73.06 “necessarily refers to ‘electrical conduit tubing lined with insulating material.’” Government Br. at 34. Yet, the Government and the CIT fail to read Heading 8547 and Heading 73.06 together in conjunction with the HTSUS term “electrical conduit” and the purpose of insulating materials in the electrical industry. Appx1706-07; Appx1715. As the Government has argued, electrical conduit “is a type of electrical equipment,” and “consequently, the term ‘insulating material’ must be interpreted as it relates to electrical conduit tubing and electrical equipment.” Government Br. 18-19, 33.

In summary, the text of Headings 8547 and 7306 should be read together, in context, to cover two mutually exclusive categories of conduit pipe. Heading 8547 covers “electrical conduit tubing” that is “lined with insulating material” such as the subject conduit, which is lined with an epoxy coating consisting of insulating materials and which serves an insulating purpose in the electrical industry. Contrarily, Heading 7306 covers “other” pipes and tubes “of iron or steel” that may be suitable for use as electrical conduit but are not lined with an insulating

material, such as “rigid” conduit, which is lined with zinc, a corrosion-resistant material with no electrically insulating purpose. Explanatory Note 85.47 and 73.06 reflect this dichotomy. Appx1312. It was error for the CIT to narrow Heading 8547 using a term from Explanatory Note 73.06 out of context.

B. The CIT Incorrectly Disregarded the Exemplars of Insulating Material in Explanatory Note 85.47.

In its opening brief, Shamrock argued that the epoxy coating meets the definitions of electrically insulating varnish as that term is used in the electrical industry and in Explanatory Note 85.47, and that the epoxy coating serves the purpose that electrically insulating varnishes serve on electrical conduit. Shamrock Br. at 37-56. Specifically, the record demonstrates that electrically insulating varnishes are applied to electrical equipment such as electrical conduit for electrically insulating purposes, including (a) “to form a protective resinous film over” electrical equipment to “contribute to the total mechanical strength, and the electrical, thermal, and chemical resistance”; (b) to provide “electrical, mechanical and environmental protection” to electrical components; and (c) “to provide a layer of electrical isolation and prevent shorting.” Appx1706-07; Appx1715.

The Government argues that Shamrock allegedly failed to establish that the epoxy coating is an electrically insulating varnish. Government Br. at 34-37. Specifically, the Government argues, mistakenly, that Shamrock did not produce “a single document” that “described the epoxy coating as an insulating varnish”

and that Shamrock allegedly failed to show the epoxy coating meets the standards or technical criteria to qualify as an insulating varnish. *Id.*

The manufacturer of the epoxy coating, Pinturas Diamex, described the epoxy coating as an insulating varnish. *See Appx1591* (“This type of materials {sic} are widely used in the formulation of *insulating varnishes and resins*, thus with the proper application, it forms {a} protective insulating coating over the underlying material.”) (emphasis added); *Appx1592* (“This film, at the proper thickness and even application, will create a film with electrical insulating properties, as their {sic} main components (Epoxy resins, Melamine and Silicones) are widely use{d} in the manufacturing of *electrical insulation resins and varnishes*.”) (emphasis added). Shamrock corroborated the manufacturer’s descriptions of the epoxy coating with expert testimony from Dr. Gotro, who has experience formulating and applying thin, polymeric materials like the epoxy coating here in electrically insulating applications, and who testified that the epoxy coating provides electrical insulation based on his experience. *Appx0328-36; Appx0311; Appx0192-94.*

The Government attempts to discount the epoxy coating because Pinturas Diamex did not provide Shamrock technical data or standards, but the Government fails to show that the epoxy coating does not meet the industry definitions of “electrically insulating varnish,” which is within the scope of Heading 8547

pursuant to the Explanatory Note. Appx1312 (noting the “insulating material” for purposes of Heading 8547 “may be *special electrically insulating varnish*, paper or paperboard, rubber, plastics, etc.”) (emphasis added); *Drygel, Inc. v. United States*, 541 F.3d 1129, 1134 (Fed. Cir. 2008) (Explanatory Notes are “‘generally indicative’ of the proper interpretation of a tariff provision.”). The Court may consult industry sources and definitions to inform whether the epoxy coating is an “electrically insulating varnish” within the common and commercial meaning of Heading 8547. *Warner-Lambert Co. v. United States*, 407 F.3d 1207, 1209 (Fed. Cir. 2005) (“To discern the commercial meaning of a tariff term, this court may consult dictionaries, scientific authorities, and other reliable information{.}”); *Well Luck Co. v. United States*, 887 F.3d 1106, 1113 n.6 (Fed. Cir. 2018) (“{T}his definition is consistent with the commercial meaning reflected in the industry dictionaries proffered by Well Luck.”); *Pillsbury Co. v. United States*, 431 F.3d 1377, 1381 (Fed. Cir. 2005) (referencing an industry definition to evidence the meaning of a tariff term).

The epoxy coating meets the industry definitions of “electrically insulating varnish” and thus would be included within the scope of Heading 8547 pursuant to Explanatory Note 85.47. The American Society for Testing Materials (“ASTM”) defines “electrical insulating varnish” as “a liquid resin system that is applied to and cured on electrical components providing electrical, mechanical and

environmental protection,” and the National Electrical Manufacturers Association (“NEMA”) defines it more broadly as “a solution of natural or synthetic resins and modifiers which are converted by chemical action to form a film after evaporation of solvents.” Appx1706. As described by Pinturas Diamex and Dr. Gotro, the epoxy coating contains epoxy and melamine *resins* and forms a film on the subject conduit after curing.⁶ Appx1591-92; Appx0184-86; Appx0304-05. Additionally, the epoxy coating provides electrical, mechanical and environmental protection to the subject conduit and the wires it houses as prescribed in the ASTM definition and evidenced by the electrical and abrasion tests conducted by Dr. Jackson and Dr. Meliopoulos.⁷ The Government’s argument critically lacks evidence that the epoxy coating does not meet the definition or function of an electrically insulating varnish within the scope of Heading 8547.

Yet, the Government and the CIT claim the epoxy coating is not an “insulating material” based on an unsupported function that it is not intended to perform. Shamrock argues that Heading 8547, as informed by Explanatory Note 85.47, includes electrical conduit lined with an insulating material that serves the electrically insulating purpose that electrically insulating varnishes perform in the

⁶ “Resins” are defined as “organic substances that... are electrical nonconductors.” Appx2196.

⁷ Shamrock also provided the dielectric strength of epoxy, contrary to the Government’s claims. Appx0852.

electrical industry, and that the epoxy coating indisputably does so in this case.

See Warner-Lambert Co., 407 F.3d at 1210 (reversing the CIT's overly restrictive requirement that breath mints contain antimicrobial ingredients, a requirement that the court found improperly discounted examples given by the relevant Explanatory Note). The electrical testing in this case demonstrates epoxy coating "forms a protective resinous film" and "contributes to the total electrical resistance" of the subject conduit and the wires run through it, significantly fulfilling the purpose of an electrically insulating varnish. Appx0826-39; Appx0857-59; Appx1223; Appx2358-59; 2369-70; Appx0022; Appx0016; Appx1707; Appx0148-49; Appx0162; Appx1419; Appx1438. It follows that the subject conduit is *prima facie* classifiable pursuant to Heading 8547 because it is lined with insulating material that serves the electrically insulating purpose of electrically insulating varnishes.

IV. Customs Ruling N306508 Is Entitled to *Skidmore* Deference.

In its initial brief, Shamrock argued that Customs has classified identical merchandise within Heading 8547 in Customs Ruling No. N306508, Appx1360, and that the CIT failed to afford the ruling any deferential weight pursuant to *Skidmore* or explain how the ruling is not persuasive. Shamrock Br. 56-61 (citing *Skidmore v. Swift & Co.*, 323 U.S. 134, 140 (1944)). The Government argues that Customs rulings are not binding on the Court and are not entitled to deference

when they do not pertain to the merchandise under consideration. Government Br. at 38. The Government fails to distinguish N306508 or explain how the ruling is not persuasive.

The Government argues that the CIT was not bound by administrative rulings because its decision was based on the record before it. Government Br. at 38. Yet, the CIT ignored a directly applicable Customs ruling, despite the agency's "specialized experience" in tariff classification and Shamrock's arguments regarding its applicability to the subject conduit. Customs rulings are entitled to deference relative to their "power to persuade." *Skidmore*, 323 U.S. at 140; *United States v. Mead Corp.*, 533 U.S. 218, 235 (2001). It was error for the CIT to dismiss the deference to which Ruling N306508 is entitled or otherwise fail to explain how the ruling was not persuasive based on the record before it.

The Government fails to show that N306508 does not pertain to the subject conduit. N306508 found that merchandise identical to the subject conduit is classifiable pursuant to Heading 8547. Both N306508 and the instant matter address UL 797 electrical conduit tubing of steel coated on the interior with a mixture of epoxy and other unnamed materials that form a thermoset insulating coating. Appx0193; Appx0145-46; Appx 0150-51; Appx1360; Appx1413-14; Appx1425; Appx1427; Appx1591-92. The Government points out that Customs rulings "are not entitled to deference when they do not pertain to the merchandise

under consideration,” but does not attempt to distinguish the electrical conduit in N306508 from the subject conduit and fails to argue how the ruling does not pertain to the merchandise under consideration. Government Br. at 38.

The Government fails to demonstrate that N306508 is not entitled to deference pursuant to *Skidmore*. The ruling persuasively demonstrates that the subject conduit is *prima facie* classifiable pursuant to Heading 8547.

CONCLUSION AND RELIEF SOUGHT

For the foregoing reasons, Plaintiff-Appellant Shamrock respectfully requests that the Court reverse the decision and judgment of the CIT, and enter judgment that the subject conduit is properly classifiable, as claimed, under Heading 8547.

Respectfully submitted,

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FORM 19. Certificate of Compliance with Type-Volume Limitations

Form 19
July 2020UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT**CERTIFICATE OF COMPLIANCE WITH TYPE-VOLUME LIMITATIONS****Case Number:** 23-1648**Short Case Caption:** Shamrock Building Materials, Inc. v. US

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